Claims Listing 05/06/09

I claim:

1. [ORIGINAL] A system, comprising:

a nozzle having an inlet, a throat, and an exhaust;

a fluid flowing through the nozzle; and,

means for inducing a phase change in the fluid within the nozzle.

2. [ORIGINAL] A system, comprising:

a nozzle having an inlet, a throat, and an exhaust;

a fluid flowing through the nozzle;

means for inducing a phase change in the fluid within the nozzle; and,

means for transforming the flow from the exhaust into work outside the system.

3. [ORIGINAL] A system, comprising:

a nozzle having an inlet, a throat, and an exhaust;

a fluid flowing through the nozzle;

means embedded within the nozzle for directly transferring energy into the fluid and inducing a phase change in the fluid; and,

means for transforming the flow from the exhaust into work outside the system.

4. [ORIGINAL] A system, comprising:

a nozzle having an inlet, a throat, and an exhaust;

a fluid flowing through the nozzle;

means embedded within the nozzle for transferring energy into and heating the nozzle, thereby indirectly transferring energy into and heating the fluid and inducing a phase change in the fluid; and,

means for transforming the flow from the exhaust into work outside the system.

5. [ORIGINAL] A system as in Claim 4, wherein the cross-sectional interior volume of the inlet, throat, and exhaust of the nozzle vary only across one plane perpendicular to the axis of fluid flowing through the nozzle.

6. [ORIGINAL] A system as in Claim 4, further comprising a surfactant having an extra ion dissolved in the fluid.

7. [ORIGINAL] A system as in Claim 6, wherein the surfactant is a short-chain molecule.

8. [ORIGINAL] A system as in Claim 6, wherein the surfactant is a short-chain molecule having only 5 to 50 atoms.

9. [ORIGINAL] A system as in Claim 6, wherein the surfactant is a short-chain molecule having only 5 to 10 atoms.

10. [ORIGINAL] A system as in Claim 6, wherein the fluid includes a lithium salt and the surfactant is non-reactive to the fluid and lithium salt.

11. [CURRENTLY AMENDED] A system as in Claim 10, wherein the nozzle further comprises:

~~a third block of~~ an insulating ~~material separating the first structural core~~ and heat transference block separating the ~~first~~ structural core of the nozzle and means embedded within the nozzle for transferring energy into and heating the nozzle, from the fluid flowing through the nozzle.

12. [CURRENTLY AMENDED] A system as in Claim 11, wherein the ~~third~~ insulating and heat transference block further comprises:

a first sub-layer of an electrical insulating material; and,

a second sub-layer of a thermal insulating material.

13. [ORIGINAL] A system as in Claim 11, wherein means embedded within the nozzle for transferring energy into and heating the nozzle, thereby indirectly transferring energy into and heating the fluid and inducing a phase change in the fluid further comprise:

a structural core formed of a first material;

a heat transference block formed of a second material, said heat transference block having at least one surface over which the fluid flows and from which heat is transferred from the heat transference block to the fluid; and,

means for inducing a low-energy nuclear reaction within the heat transference block to create heat in the heat transference block.

14. [ORIGINAL] A system as in Claim 13, wherein the fluid includes deuterium.

15. [ORIGINAL] A system as in Claim 13, wherein the second material is a metal alloy whose principal component comes from the following set of materials: palladium, lanthanum, praseodymium, cerium, titanium, zirconium, hafnium, vanadium, niobium, tantalum, nickel, thorium, protactinium, and uranium.

16 [ORIGINAL] A system as in Claim 13, wherein the second material is palladium.

17. [ORIGINAL] A system as in Claim 16, wherein the means for inducing a low-energy nuclear reaction within the heat transference block to create heat in the heat transference block further comprise:

an anode; and,

means for electrically stimulating the heat transference block by passing a current between the anode and the heat transference block.

18. [ORIGINAL] A system as in Claim 17 wherein the electrical stimulation of the heat transference block varies periodically.

19. [ORIGINAL] A system as in Claim 17, wherein the stimulation of the heat transference block occurs in a periodic pattern of increasing impulses.

20. [ORIGINAL] A system as in Claim 13, wherein the means for inducing a low-energy nuclear reaction in the heat transference block further comprise at least one laser in the nozzle whose emission is directed against the heat transference block.

21. [ORIGINAL] A system as in Claim 20, wherein the laser is capable of variable emission.

22. [ORIGINAL] A system as in Claim 16, wherein the means for inducing a low-energy nuclear reaction within the heat transference block to create heat in the heat transference block further comprise:

an anode;

a cathode;

means for electrically stimulating the heat transference block between the anode and cathode; and,

at least one laser whose emission affects the heat transference block.

23. [ORIGINAL] A system as in Claim 21, wherein both the laser, and the means for electrically stimulating between the anode and cathode the heat transference block, are capable of variable output.